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## Talking Points

- Who we are:  
Brief Introduction to the Institute
- Why we are here:  
Addressing the Crisis of Cost of US Healthcare
- What we believe:  
The imperative for change together with ubiquitous wireless technology provides compelling opportunity
- What will it take:  
Regulatory and reimbursement clarity and timeliness to encourage investment and catalyze innovation

# West Wireless Health Institute

- An independent, nonprofit medical research organization launched in March 2009, with ~ \$100 million in funding to date from the Gary and Mary West Foundation.
- Primary mission: Lower health care costs



# Core Functions

## INNOVATE

Commit resources to develop meaningful innovation in health care technology, solutions and business models

## VALIDATE

Champion the clinical and economic validation of specific technologies and solutions

## ADVOCATE

Work to shape the external environment to accelerate the adoption of novel medical technology like wireless health solutions

## INVEST

Evaluation of internal and external opportunities to accelerate and create innovations in health care

## COMMERCIALIZE

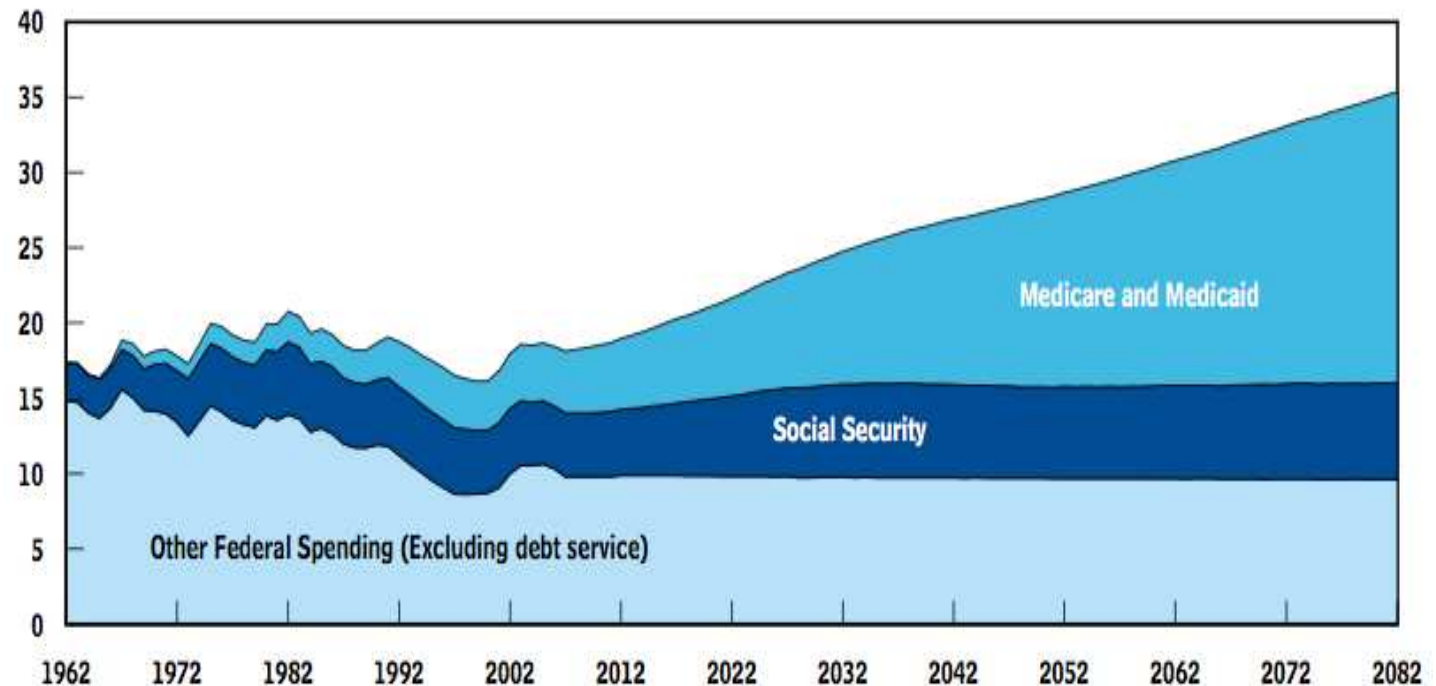
Create the capacity to move products and solutions through the initial commercialization process

## Fiscal scenario equals fiasco

**Figure 1-1.**

### Projected Federal Spending Under One Fiscal Scenario

(Percentage of gross domestic product)



Source: Congressional Budget Office.

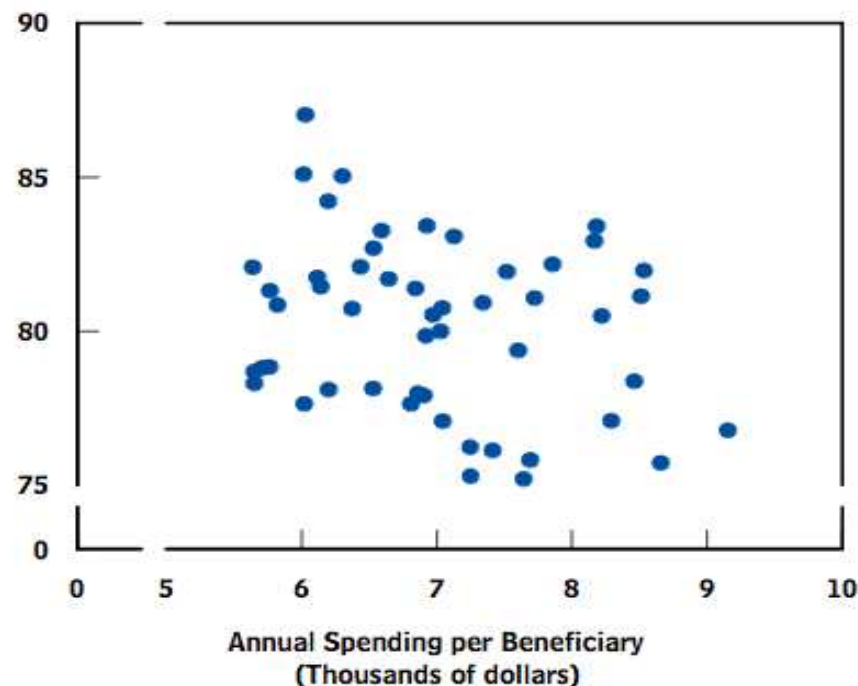
Note: The figure, from the December 2007 *Long-Term Budget Outlook*, portrays CBO's "alternative fiscal scenario," which deviates from the agency's baseline projections to incorporate some changes in policy that are widely expected to occur and that policymakers have regularly made in the past.



More  
spending  
does not  
equal  
more  
quality

## The Relationship Between Quality of Care and Medicare Spending, by State, 2004

(Composite measure of quality of care,  
100 = maximum)



Source: Congressional Budget Office based on data from the Centers for Medicare and Medicaid Services and from the Department of Health and Human Services, Agency for Healthcare Research and Quality, *National Healthcare Quality Report, 2005* (December 2005), Data Tables Appendix, available at [www.ahrq.gov/qual/nhqr05/index.html](http://www.ahrq.gov/qual/nhqr05/index.html).

Status quo  
cannot be  
sustained

# Current health care system is unsustainable

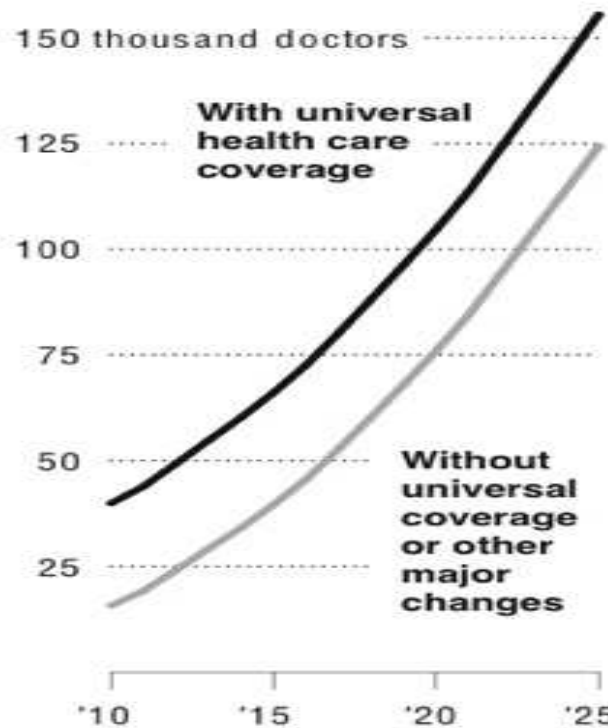


Physicians

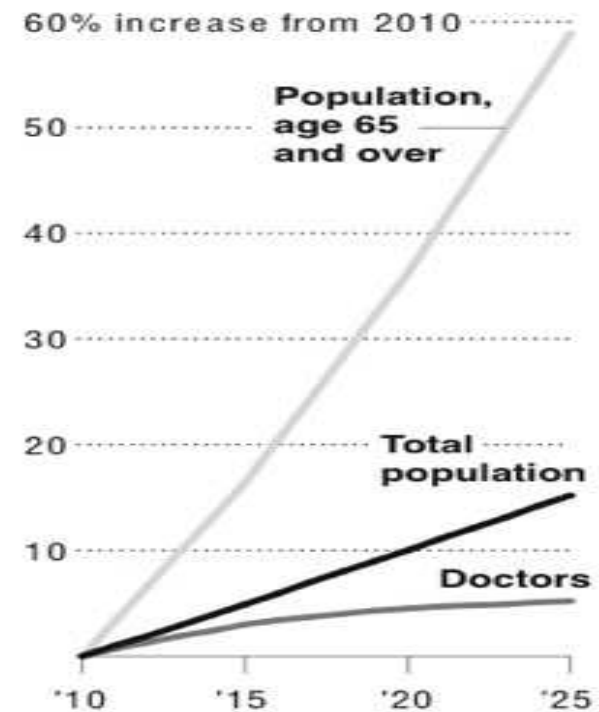


Demand  
for Care

Projected shortfall in number  
of doctors needed



Projected growth in  
population vs. doctors



Source: American Association of Medical Colleges

THE NEW YORK TIMES

## Wireless Health: Reasons for optimism

### Infrastructure Independence<sup>SM</sup>

A New Model of Health Care

#### Current Model

- low frequency visits
- acute care focused
- appointment driven
- location centric
- high cost

#### Infrastructure Independence

- high touch
- right treatment
- when they need it
- where they are
- lower cost



## Vision

- Present state:** Chronic diseases are episodically diagnosed and intermittently treated, consuming enormous resources driven by exacerbations, clinical decompensations, and complications.
- Future state:** Chronic diseases will be met with continuous care, improving outcomes and lowering costs by prediction and prevention of acute presentations.
- Path:** Near, on, or in-body sensor technology, providing actionable diagnostic information, linked to learning systems and titratable therapies, enabling continuously-tailored, feedback-controlled treatment.

***Replace costly intermittent rescue with continuous and cost-effective care.***

## State of the Industry

# Early stage industry with huge potential

- Against the backdrop of an obviously unsustainable healthcare system to which we have just *increased access*...
- Increased recognition of the wireless healthcare opportunity
  - ...that we have been talking about for 10 years
  - ...that requires risk capital to fulfill its potential
  - ...that in turn requires regulatory clarity and timeliness



# Significant barriers

- **Business Model Uncertainty:**

- Venture (risk) capital – only follows real business opportunity
- We must solve reimbursement issues – who pays & for what?

- **Regulatory:** “Disclarity” keeping R&D, investment on sidelines

- **Outstanding Legal Concerns:**

- Privacy – clarity, with consistent interpretation / guidance
- Liability – whose, for what – tort reform?
- Interstate medical practice / across state lines

- **Entrenched Health Care Establishment:** shift from hospital and physician as the center to the home/family/patient as center – clear need to align incentives with long-term vision



# Moving Forward: Regulatory Clarity

- Current “disclarity” is dampening investment and chilling innovation because of uncertainty around regulation of nonmedical devices (e.g. smartphones)
- In defining regulatory pathways, we should make clear the distinction between *regulated medical devices* that detect and/or treat disease and *ubiquitous, multipurpose nonmedical devices*.

## Medical Facsimile Cover Sheet

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Fax _____	_____
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Identifier _____	_____
Medical Record Number _____	_____
Reason For Release _____	_____
Information Released _____	_____

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“Somehow your medical records got faxed to a complete stranger. He has no idea what's wrong with you either.”





Required  
elements to  
to catalyze  
wireless  
healthcare

# Critical Success Factors



**C**ost reduction while preserving / enhancing outcomes  
**O**utcome measures (clinically *and* economically meaningful)  
**S**olutions as opposed to technologies (seamless integration)  
**T**ransparent, timely, & predictable regulation and reimbursement  
**S**afe harbor / tort reform



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# Moving Forward: Aligning Incentives

- Lack of reimbursement for health care innovations such as wireless health solutions inhibits deployment in non-integrated delivery settings.
- However, **innovations within integrated delivery systems show the way forward:**
  - VHA Care Coordination Home Telehealth (CCHT) program
    - 19% reduction in hospital readmissions and average cost of home care \$1,600 compared to up to \$77k for nursing home care
  - Community Care North Carolina (enhanced medical home model)
    - Estimated savings for FY2006 were \$150-\$170 million relative to what the state (Medicaid) would have spent under previous model
  - Geisinger (ProvenHealth Navigator medical home initiative)
    - Among innovations, patients communicate online with doctors and send health monitoring info including blood glucose and blood pressure
    - Between 2006-2008, demonstrated 20% reduction in hospital readmissions and 18 % reduction in hospital admissions